

SWBAT: find the charges on atoms and objects

Jan 4-7:20 AM

Welcome!!!

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SECA Physics
Tuesday 27 January 2015

* Pick up:

- slip of paper (for later)
- white board, eraser, marker

Opening question:

Which do you think is stronger:
electric forces or gravitational forces?

↳ PVC
< 1 kg.

↳ EARTH

6,000,000,000,000,000,000,000 kg
 6×10^{24} kg



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comb & tissue demo

Centering

Sep 7-7:04 AM

Daily 3 Questions

- * Every day except test/project days
- * 3 Questions on the topics of the day
- * Main source of daily points
- * I am happy to give credit when I have no concerns about someone giving or getting help with the answers.

Reminder:

You can't get your points if you don't have your NAME!!!

Name	Period
1.	
2.	
3.	

Sep 9-7:32 AM

Review:

What's an **ATOM** like?

proton ^{NATURAL} *neutron* *electron*

P N E

Which is in the nucleus (center)?

P & N

Which has a positive charge?

PROTON

Which has a negative charge?

ELECTRONS



Jan 31-7:19 AM

Neutral and Charged Objects:

TRUE or FALSE: An object that is positively charged contains all protons and no electrons.

$\# \text{PROTONS} > \# \text{ELECTRONS}$

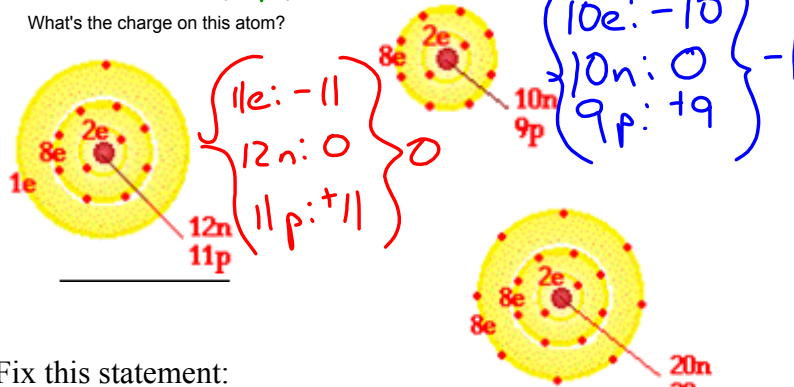
TRUE or FALSE: An object that is electrically neutral contains only neutrons.

$\rightarrow \text{ATOMS: } P \neq N$ $\# \text{PROTONS} = \# \text{ELECTRONS}$

TRUE or FALSE: An object that is negatively charged could contain only electrons with no accompanying protons.

$\rightarrow \text{ATOMS: } P \neq N \neq E$
 $\# \text{ELECTRONS} > \# \text{PROTONS}$

What's the charge on this atom?



Fix this statement:

"A ^{NEGATIVELY} positively charged object is an object that has ^{LESS} extra positive electrons."

Jan 31-7:19 AM

BALLOONS LIKE TO GET
EXTRA ELECTRONS \Rightarrow NEGATIVE

Let's explore...

What do you observe with balloon?

BLACK CLOTH

WHITE PIPE : REPEL \ominus

GLASS : ATTRACT \oplus

GREY PLASTIC : REPEL \ominus

METAL : ATTRACT \oplus

TRIBOELECTRIC



Fundamental: Opposite Charges ATTRACT,
Like Charges REPEL!

Bi
(#

Nov 15-7:20 AM

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Name	Period
1.	
2.	
3.	

Sep 9-7:32 AM

1. Which has a positive charge?

- A. proton
- B. neutron
- C. electron

2. Opposite charges ATTRACT. Like charges repel.

3. TRUE of FALSE: An object that is electrically neutral contains only neutrons.

Feb 1-7:52 AM